



A-68990-3

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1 atgcaccacc accaccacca cgtacgtctc tcttcccgca ctccgtccga caaaccggta
61 gctcacgtag tagctaacc gcaggtgaa ggtcagctgc agtggctgaa ccgcgcgct
121 aacgtctctgc tggctaaccg tgtagaactg cgcgacaacc agctggtagt accgtccgaa
181 ggtctgtacc tgatctactc ccaggtactg ttcaaaggte agggttgtcc gtccactcac
241 gtactgtga ctacactat ctcccgcatc gctgtatcct accagactaa agtaaacctg
301 ctgtccgcta tcaaattccc gtgtcagcgc gaaactccgg aagggtgctga agctaaaccg
361 tggtagaac cgatctacct ggggtggtgta ttccagctgg aaaaagggtga ccgcctgtcc
421 gctgaaatca accgcccga ctacctggac ttcgctgaat ccggtcaggt atacttcggt
481 atcatcgctc tgtga

FIG. 6A

1 MHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRR NALLANGVEL RDNQLVVPSE
61 GLYLIYSQVL FKQGQCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP
121 WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL

FIG. 6B

SEQ ID NO:	Wild-type TNF amino acid	Wild-type TNF amino acid number	Mutants created
9	Q	21	R
10	N	30	D
11	R	31	I, D, E
12	R	32	D, E, S
13	A	33	E
14	A	35	S
15	K	65	D, T, M, W, I, Q, S, N, V, E
16	G	66	Q, K
17	Q	67	D, W, Y, R, K, S
18	A	111	R, E
19	K	112	D, E
20	Y	115	Q, K, E, N R, F, H, M, L, I, W, D, T, S
21	D	140	R, K
22	D	143	E, N, Q, S, R, K
23	F	144	N
24	A	145	R, D, K, N, H, T, Q, E, Y, M, S, F
25	E	146	N, K, R, S
26	S	147	R

ALSO MADE DOUBLE MUTANTS K65E/D143K (SEQ ID NO: 27), K65E/D143R (SEQ ID NO: 28), K65D/D143K (SEQ ID NO: 29) AND K65D/D143R (SEQ ID NO: 30)

FIG. 7